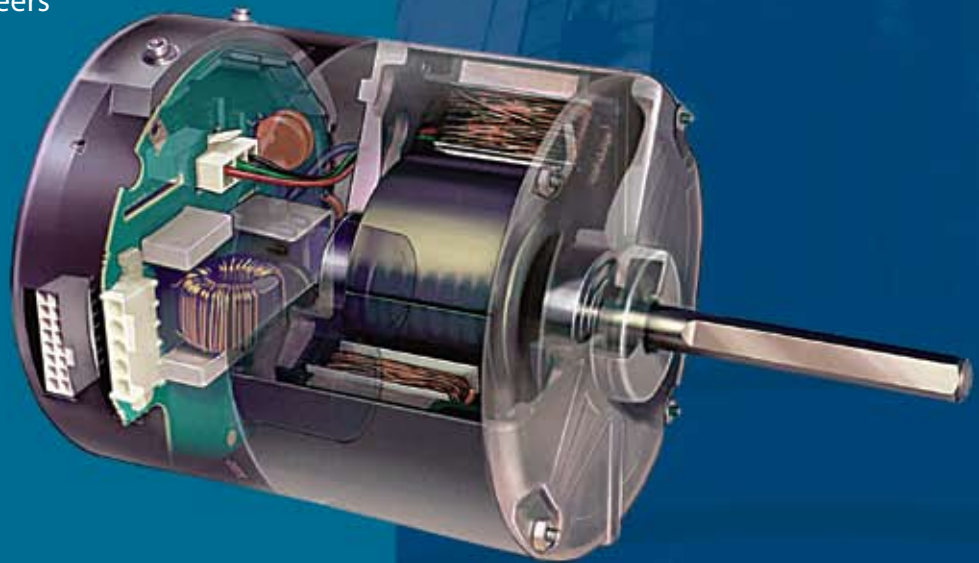


Vertical Heating and Cooling Systems

Use the GE ECM™ with Whalen's
Series VI Heat Pump and Room
Fan Coil Units

- Flexible design for engineers
- More efficient operation
- Simple installation
- Adaptable to various system configurations
- Quiet operation at optimum speeds
- Programmable in factory or field setting



The Whalen Company

PO Box 1390 · Easton, Maryland 21601

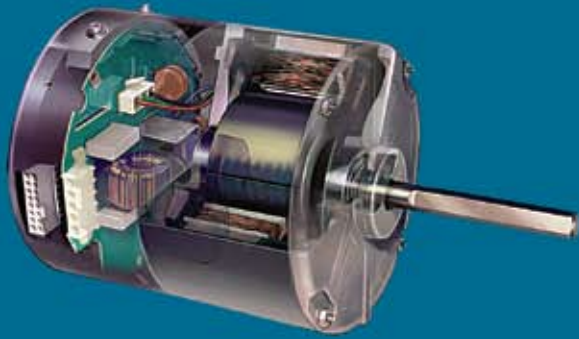
Tel 410.822.9200 · Fax 410.822.8926

www.whalencompany.com



Photo and information courtesy of





Use the GE ECM™ with Whalen's Series VI Heat Pump and Room Fan Coil Units

Advantages for the Engineer

- Optimum performance and efficiency
- Ease of unit selection because of constant design CFM over a wide range of static pressures
- Programmable alternate CFM settings are available for unique system configurations such as a dehumidification mode

Advantages for the Contractor

- Wide CFM selection plus trim
- Constant CFM simplifies installation
- Can deliver proper airflow in applications with higher restrictions
- Replaceable controls without taking out entire motor

Advantages for the Owner

- Lower operating costs - efficient!
- Lower sound levels
- Precise airflow gives better humidity/discharge temp control

Features and Benefits

What is an Electronically Commutated Motor?

The GE ECM™ is a brushless-DC motor with all of its speed and torque controls built in. The GE ECM™ has all the efficiency and speed control advantages of a DC motor with none of the disadvantages, such as carbon brush wear, short life, and noise. The GE ECM™ uses 1-phase AC input power and converts it into 3-phase operation. 3-phase motors have superior efficiency and reduced noise to single phase motors. The GE ECM™ uses GE patented back EMF sensing to determine rotor position and perform the commutation function. The motor utilizes a permanent magnet rotor resulting in near zero rotor losses. The rotor is connected to the shaft through resilient rings to absorb high frequency torque ripple.

Constant Airflow

The most important programmable feature is the patented sensorless, constant-airflow technology that allows the GE ECM™ to maintain a programmed level of airflow over a wide range of external static pressure in an air-distribution system. It even holds airflow constant under less-than-optimum duct configurations and other conditions that produce high or varying static pressure. It does so by automatically adjusting its speed and torque to deliver the airflow you program into it. Constant airflow capability is critical to providing the greatest performance and comfort.

Ultra-High Efficiency

In addition to the ability to provide better CFM control, there are impressive gains in EER/COP for the heat pump utilizing the ECM motor. For example, a 600 CFM Whalen unit using the 410A refrigerant chassis is able to achieve an EER of 14.1 at closed loop, cooling tower conditions, and an EER of 16.0 at ground loop conditions - considerably better than competitive vertical stacked heat pump products.



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